

D4 and D5 in wash-off cosmetics

Campaign Information

June 2025

The Environment Agency's Chemical Compliance Team (CCT) is preparing to undertake a compliance campaign on D4 and D5 in wash-off cosmetics. This work falls under our remit of UK REACH Annex XVII, however as the restriction applies specifically to cosmetic products, there may be interest from the Office for Product Safety and Standards (OPSS) on a national basis, and Trading Standards officers by region.

UK REACH prohibits the placing of the market all wash-off cosmetic products that contain a concentration equal to or greater than 0.1% of Octamethylcyclotetrasiloxane ('D4') or Decamethylcyclopentasiloxane ('D5') by weight of either substance. In this instance, 'wash-off' means cosmetic products that are washed off with water after application.

Following the identification of some products being available through online platforms which list one or both substances in their ingredients, we are seeking to carry out a compliance check through a comms led campaign to determine the current scale of prohibited items being placed on the market within or to the United Kingdom. We are aiming to remove non-compliant items from sale and educate sellers and manufacturers of the restrictions and their responsibilities.

We are looking to liaise with the OPSS due to their responsibility over the Cosmetic Regulations as well as the Chartered Trading Standards Institute, due to the shared regulatory role over UK REACH. We aim to take full responsibility for the research, correspondence and any follow-up action related to this work, but we wish to keep those with any keen interest in this campaign involved to the degree in which they see fit. Outside of regulatory roles, we aim to discuss with the Cosmetic, Toiletries and Perfumeries Association (CTPA) to advise that we are looking into cosmetic products, and so that they are able to share details of the relevant restrictions with their members.

Background

The Environment Agency and their Chemical Assessment Unit (CAU) were instrumental in the original research that led to the restriction of D4 and D5 into EU REACH in the mid-2000's. Joining up with organisations across Europe, it was determined that D4 fit the criteria for a PBT substance (persistent, bioaccumulative, toxic) whilst D5 is a VPVB (very persistent, very bioaccumulative) and thus both are considered substances of very high concern (SVHCs).

In writing the restriction on these substances, research was carried out to determine where these substances were most frequently used and of those uses, where the highest risks to the environment were, with particular interest in the aquatic environment. Following work with industry and engagement with manufacturers, personal wash-off care products were deemed the highest risk due to the direct entry to the water system through drainage and thus formed the basis of the REACH restriction.

During a compliance project carried out by ECHA in 2024, 11 products were identified containing D4, 12 products containing a blend of D4, D5 and D6 (known as Cyclomethicone) with 111 products identified containing D5. This is a total of 134 products found from an assessment of 4,434 products, which is around 3% failing to meet compliance requirements. It is following on from this compliance assessment that we are seeking out our own compliance checks within the UK. Should any cause to do so arise, we will consider analysis of products to determine the D4 and D5 content ourselves however, our primary objective at this stage is to inform and bring sellers and manufacturers into compliance with UK REACH.

Further information

Do you have any questions or comments on our work? Please contact chemicalrestrictions@environment-agency.gov.uk